

Title (en)
MANUFACTURING METHOD FOR SOLID-STATE IMAGING DEVICE AND SOLID-STATE IMAGING DEVICE

Title (de)
HERSTELLUNGSVERFAHREN FÜR EINE FESTKÖRPERABBILDUNGSVORRICHTUNG UND FESTKÖRPERABBILDUNGSVORRICHTUNG

Title (fr)
PROCÉDÉ DE FABRICATION D'UN DISPOSITIF D'IMAGERIE À SEMI-CONDUCTEUR ET DISPOSITIF D'IMAGERIE À SEMI-CONDUCTEUR

Publication
EP 2863438 B1 20190605 (EN)

Application
EP 13804510 A 20130221

Priority
• JP 2012136198 A 20120615
• JP 2013054392 W 20130221

Abstract (en)
[origin: EP2863438A1] A manufacturing method is provided for a solid-state imaging device which is easy to manufacture while having excellent reliability as a product. A method for manufacturing a solid-state imaging device 1A comprises a first step of preparing an imaging element 10 having a first principal surface S1 for receiving an energy ray incident thereon, a second principal surface S2 opposing the first principal surface S1 and having at least one electrode 14 arranged thereon, and a photoelectric converter part 11 for photoelectrically converting the incident energy ray so as to generate a signal charge; a second step of preparing a support substrate 20, provided with at least one through hole 23 extending in a thickness direction thereof, having third and fourth principal surfaces S3, S4 opposing each other; a third step of aligning the imaging element 10 and the support substrate 20 with each other so that the electrode 14 is exposed out of the through hole 23 while the second and third principal surfaces S2, S3 oppose each other and joining the imaging element 10 and the support substrate 20 to each other; and a fourth step of arranging a conductive ball-shaped member 30 in the through hole 23 and electrically connecting the ball-shaped member 30 to the electrode 14 after the third step.

IPC 8 full level
H01L 27/146 (2006.01); **H01L 21/77** (2017.01); **H01L 27/14** (2006.01); **H04N 5/369** (2011.01)

CPC (source: EP KR US)
H01L 21/77 (2013.01 - US); **H01L 27/14634** (2013.01 - EP KR US); **H01L 27/14636** (2013.01 - KR); **H01L 27/1464** (2013.01 - EP KR US); **H01L 27/1469** (2013.01 - EP KR US); **H01L 27/14636** (2013.01 - EP US); **H01L 2224/11** (2013.01 - EP US); **Y10T 29/49124** (2015.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2863438 A1 20150422; EP 2863438 A4 20160224; EP 2863438 B1 20190605; CN 104396016 A 20150304; CN 104396016 B 20170329; JP 2014003091 A 20140109; JP 6095903 B2 20170315; KR 102051167 B1 20191202; KR 20150032658 A 20150327; TW 201351625 A 20131216; TW I573256 B 20170301; US 10068800 B2 20180904; US 10825730 B2 20201103; US 2015187649 A1 20150702; US 2018286752 A1 20181004; WO 2013187086 A1 20131219

DOCDB simple family (application)
EP 13804510 A 20130221; CN 201380031690 A 20130221; JP 2012136198 A 20120615; JP 2013054392 W 20130221; KR 20147029930 A 20130221; TW 102108908 A 20130313; US 201314407633 A 20130221; US 201816000603 A 20180605